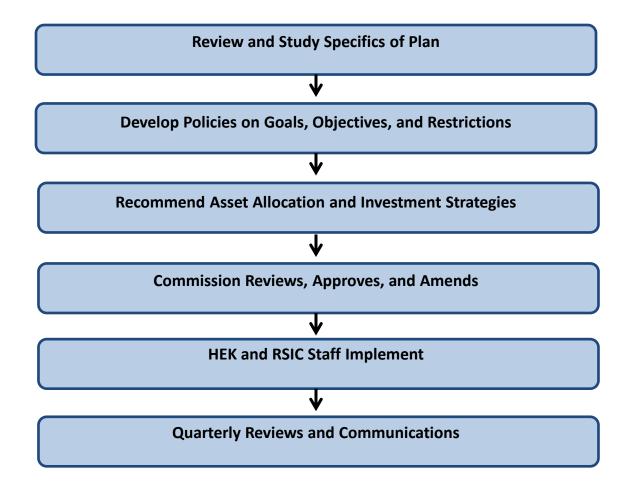
#### RSIC PHILOSOPHY AND PRACTICE

HERSHEL HARPER, CIO, CFA
December 11, 2013

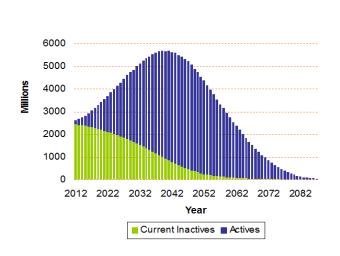


## From Analysis to Investment





#### Plan's Specific Attributes



Metric	Value
Actuarial Rate of Return	7.5%
ER + EE Contributions	18.9%
Liquidity Required	~ 4.0%
Funded Ratio	~ 56%
Amortization Period	~ 29 yrs.

The RSIC's primary investment objective is to provide, over long-term periods, an adequate pool of assets to support the benefit obligations to participants and beneficiaries of the Retirement System. In pursuing these objectives, the RSIC seeks to achieve a high level of investment return consistent with goals of the Retirement System. A secondary objective is to reduce, over time, the unfunded liability a prudent level of portfolio risk.



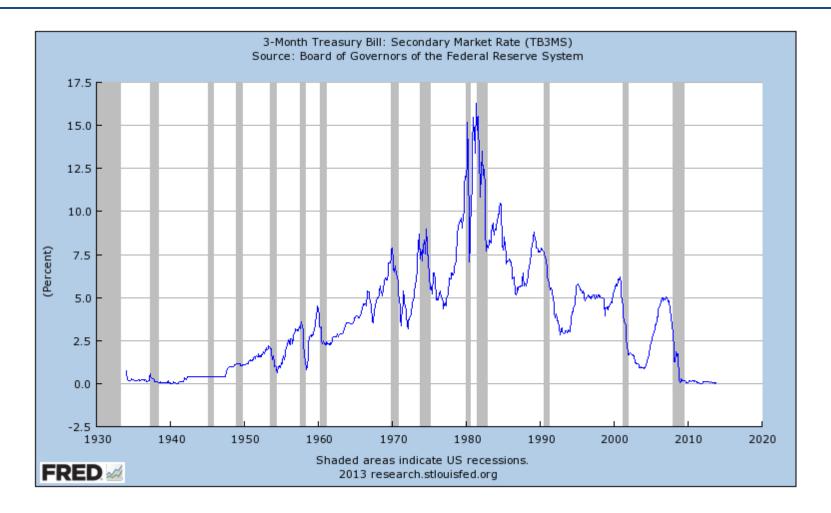
#### **Employee & Employer Contributions**

# South Carolina Retirement System Sensitivity of the Valuation Interest Rate Assumption

	Current	Pro				
	Assumption	<b>Alternative Rate of Return Assumptions</b>				
Item	7.50%	7.00%	5.00%			
(1)	(2)	(3)	(4)	(5)		
Applicable contribution rates for FY 2015						
8. Employer Contribution Rate	10.90%	11.75%	13.77%	16.16%		
9. Member Contribution Rate	8.00%	8.85%	10.87%	13.26%		
10. Total Contribution Rate (8. + 9.)	18.90%	20.60%	24.64%	29.42%		



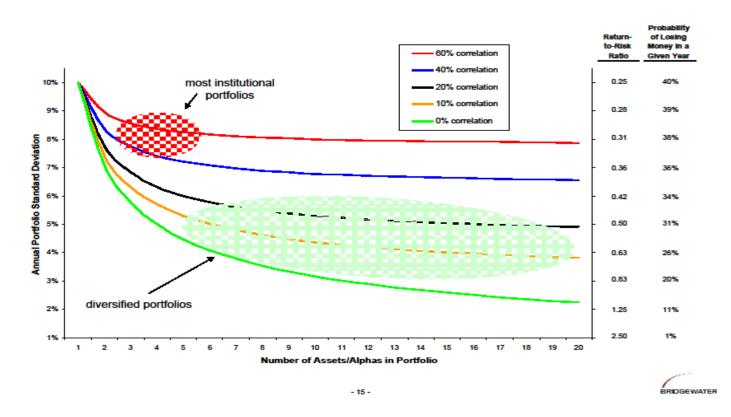
### Interest Rate Cycles





# **Diversification and Efficiency**

#### **DIVERSIFICATION CAN IMPROVE YOUR RATIO**





#### Framework for Setting Expectations

Strategic Tactical Historical Total Return Risk Free Rate Allocation Opportunities Since 1925 8.7% 3.8% + 4.9% ? + Risk Ratio Risk Ratio ? 12.1% Χ 0.41 Χ **Forward Expected Return** 1.0% 6.75% 5.75% ? + + Risk Ratio Risk Ratio

11.5%

0.50

Χ



Source: Bridgewater, HEK

Χ

?

### SCRS Asset Allocations Studied Capital Market Expectations – 4th Quarter 2012 (10 and 30 year outlook)

Asset Class	Current Target Policy (80% R-S)	Alternative 1: Proposed Solution (85% R-S)	Alternative 2: Same Risk Higher Return (91% R-S)	Alternative 3: Capped Private Market Investments (85% R-S) <sup>6</sup>	Alternative 4: No Alternative Investments (60% R-S)
Global Equity <sup>1</sup>	38%	40%	32%	42%	60%
Real Assets <sup>2</sup>	6%	8%	9%	6%	0%
Opportunistic <sup>3</sup>	15%	18%	27%	15%	0%
Diversified Credit <sup>4</sup>	21%	19%	23%	22%	0%
Fixed Income <sup>5</sup>	20%	15%	9%	15%	40%
Total	100%	100%	100%	100%	100%
10 Year Expected Return	7.00%	7.14%	7.57%	7.06%	6.15%
10 Year Expected Risk	12.52%	11.54%	12.52%	12.81%	12.98%
10 Year Sharpe Ratio	0.456	0.506	0.501	0.450	0.374
10 Year Expected Inflation	2.30%	2.30%	2.30%	2.30%	2.30%
30 Year Expected Return <sup>6</sup>	7.55%	7.68%	8.04%	7.53%	6.79%
30 Year Expected Risk	11.93%	11.04%	11.97%	12.17%	12.19%
30 Year Sharpe Ratio	0.415	0.460	0.454	0.405	0.344
30 Year Expected Inflation	2.30%	2.30%	2.30%	2.30%	2.30%

<sup>&</sup>lt;sup>1</sup> Global Equity is comprised of Global Public Equity and Private Equity

<sup>&</sup>lt;sup>6</sup> Private Market Investments (Private Equity, Private Debt, and Real Estate) and Hedge Funds are capped at 20% of the total asset allocation.





SC RETIREMENT SYSTEM INVESTMENT COMMISSION

<sup>&</sup>lt;sup>2</sup> Real Assets is comprised of Real Estate and Commodities

<sup>&</sup>lt;sup>3</sup> Opportunistic is comprised of Hedge Funds and Global Asset Allocation (GAA)

<sup>&</sup>lt;sup>4</sup> Diversified Credit is comprised of High Yield Bonds, Bank Loans, Emerging Market Debt, and Private Debt/Opportunistic Credit

<sup>&</sup>lt;sup>5</sup> Fixed Income is comprised of Core Fixed Income, International Bonds, Intermediate Credit, Short Credit, Short Gov't Bonds, and Cash

### Adopting the Strategy

- In February, HEK and RSIC present Investment Strategy recommendations to Commission
- In April, after the review period, the Commission approves strategy and related policies (SIOP & AIP)
- Commission may amend anytime



- Due diligence team typically Commissioners, RSIC Staff, and HEK
- Sourcing ideas based on Portfolio fit and risk-return appropriateness
- Team meets with prospective external manager investment team
- If further diligence is required, the investment team will send them our Requested Due Diligence files, which include the following:
  - Due Diligence Questionnaires
  - Firm's Policies and Procedures
  - RSIC Operational Due Diligence Questionnaire
  - Historical investment data for manipulation
- Coordinated effort with HEK's research team



- On-site due diligence meeting at the manager's office
  - involves meeting various members of the firm,
  - checking operational systems,
  - going into detail on historical investments.
  - A Commissioner is typically part of this on-site analysis.
- The Investment Team will complete a full Due Diligence Report on the investment which covers all aspects of the investment including analysis, market research, firm background, operational due diligence, reference calls, etc.



- The Director of the asset class will review all of the materials for adequacy and portfolio fit, and then our Internal Audit group will review all due diligence materials for Completeness.
- The RSIC Internal Investment Committee will review the opportunity and make appropriate recommendation to Commissioners.
- Continue to incorporate HEK's research throughout the process



- Once approved by the RSIC Internal Investment Committee, then it will go to the Strategic Partnership Investment Committee or it will go the RSIC Investment Commission.
- After approval by the respective Committee or Commission, RSIC
   Investment Team and Legal will negotiate the contract and present for execution.



### Ongoing Due Diligence Cycle

#### Q1 2013

- Receive Monthly/Quarterly Account Statement
- •Generate Flash Reports & present to IIC

#### Q3 2013

- Receive Monthly/Quarterly Account Statement
- Generate Flash Reports & present to IIC
- •Complete Audited FS Checklist for FoFs









#### Q2 2013

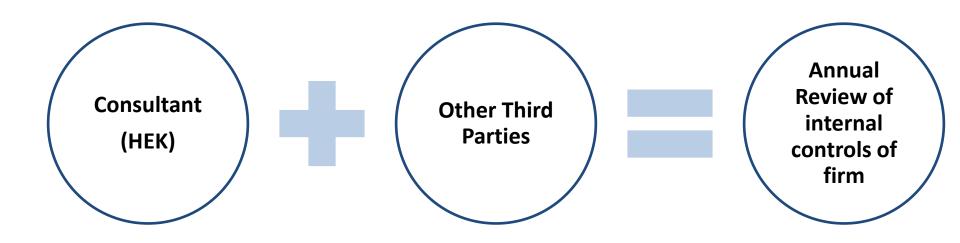
- Receive Monthly/Quarterly Account Statement
- Generate Flash Reports & present to IIC
- Complete Audited FS Checklist (ex. FoFs)
- Complete Semi-Annual Review Form (further instructions to follow)

#### Q4 2013

- Receive Monthly/Quarterly Account Statement
- Generate Flash Reports & present to IIC
- •Fee validation project
- Complete Semi-Annual Review Form (further instructions to follow)



## Third Party Due Diligence





# Keeping Track of it All

Fund / Manager	Primary Coverage	Secondary Coverage	Ongoing Meeting/Call	Semi-Annual Review	Audited Financial Statement Review
Aberdeen EME	Bryan Moore	JP Boyd	8/15/2013	8/16/2013	4/18/2013
Advent Int'l GPE VII	Dave Klauka	Bryan Moore	6/19/2013	12/9/2013	5/28/2013
Angelo Gordon VI	Bryan Moore	Louis Darmstadter	6/10/2013	12/6/2013	4/17/2013
Avenue Europe I	Bryan Moore	Dave Klauka	10/9/2013	10/9/2013	4/17/2013
Avenue Europe II	Bryan Moore	Dave Klauka	11/19/2013	11/19/2013	4/17/2013
Avenue Spec VI	Bryan Moore	Dave Klauka	10/9/2013	10/9/2013	4/17/2013
Azalea III	Louis Darmstadter	Dave Klauka	9/5/2013	12/6/2013	4/9/2013
BC European Cap IX	Bryan Moore	Dave Klauka	11/7/2013	11/7/2013	4/17/2013
BlackRock Core	Mike Addy	Nicole Waites	9/30/2013	8/6/2013	4/23/2013
Bridgepoint Europe IV	Bryan Moore	Dave Klauka	9/16/2013	9/16/2013	4/18/2013
Bridgewater All Weather	Geoffrey Berg	David Phillips	11/7/2013	11/7/2013	4/23/2013
Bridgewater PA II	Geoffrey Berg	David Phillips	11/7/2013	11/7/2013	4/23/2013
Bridgewater PAMM II	Geoffrey Berg	David Phillips	11/7/2013	11/7/2013	4/23/2013

- Maintains audit trail
- Sortable
- Automatically tracks Semi-Annual Reports



#### Performance- Plan and Asset Class

<b>Executive Summary</b>	Mkt Val <sup>1</sup>	Month	3 Month	YTD	FYTD	1 Year	2 Years	3 Years	5 Years
TOTAL PLAN (NET OF FEE)	\$27,681	2.84%	4.33%	7.04%	4.33%	9.99%	11.68%	8.22%	7.16%
POLICY BENCHMARK		2.41%	3.93%	5.99%	3.93%	8.27%	10.29%	7.14%	5.92%
Total Value Added		0.43%	0.40%	1.05%	0.40%	1.72%	1.39%	1.08%	1.24%
Cumulative Benefit Payments (Net) <sup>2</sup>		(62.90)	(287.03)	(777.67)	(287.03)	(964.29)	(2,042.43)	(2,967.25)	(4,702.03)

Active Managers Performance	Mkt Val <sup>1</sup>	% of Plan	Month	3 Month	YTD	FYTD	1 Year	2 Years	3 Years	5 Years
TOTAL PLAN	\$27,681	100.00%	2.84%	4.33%	7.04%	4.33%	9.99%	11.68%	8.22%	7.16%
POLICY BENCHMARK			2.41%	3.93%	5.99%	3.93%	8.27%	10.29%	7.14%	5.92%
Russell Overlay and Cash <sup>3</sup>	2,950	10.66%	8.77%	15.57%	16.57%	15.57%	21.87%	7.52%	4.90%	-5.24%
Total Public Gbl Equity	4,155	15.0%	5.90%	7.47%	9.43%	7.47%	16.08%	21.25%	10.57%	9.33%
Total Real Estate	1,100	4.0%	0.79%	5.65%	15.41%	5.65%	19.06%	13.35%	11.28%	3.25%
Private Debt	1,641	5.9%	1.36%	3.76%	12.70%	3.76%	16.18%	13.43%	9.96%	11.57%
GTAA	1,826	6.6%	2.68%	3.68%	1.83%	3.68%	3.35%	10.12%	8.74%	7.82%
Private Equity	2,636	9.5%	1.48%	3.37%	14.92%	3.37%	19.35%	13.13%	14.57%	8.57%
HF (Low Beta)	2,936	10.6%	1.80%	3.33%		3.33%				
Mixed Credit	2,847	10.3%	0.99%	2.00%	4.39%	2.00%	6.95%	9.59%	6.49%	12.49%
Global Fixed Income	1,029	3.7%	2.22%	1.53%	-2.33%	1.53%	-0.98%	5.19%	4.21%	9.09%
Total Commodity	76	0.3%	-2.11%	0.69%	-10.42%	0.69%	-12.67%			
Core Fixed Income	2,355	8.5%	1.19%	0.68%	-1.60%	0.68%	-1.07%	2.95%	3.44%	6.05%
Short Duration	3,226	11.7%	0.32%	0.60%	0.85%	0.60%	1.36%	2.05%	1.89%	
Emerging Market Debt	905	3.3%	4.24%	0.15%	-8.48%	0.15%	-3.92%			

<sup>&</sup>lt;sup>1</sup> Market values in millions.

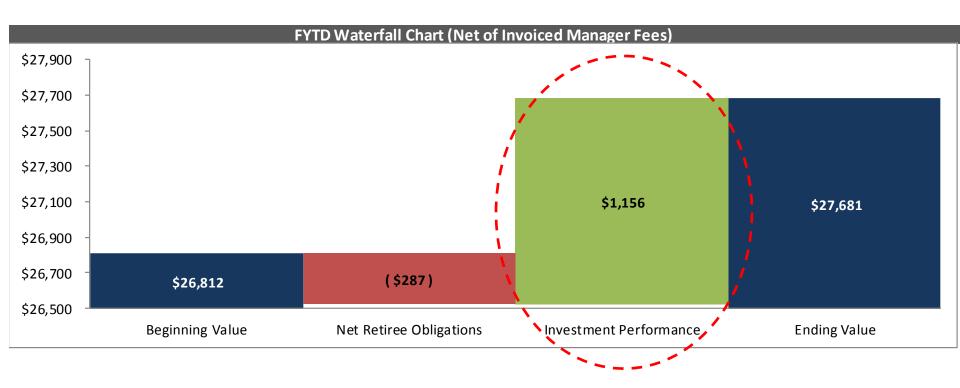
<sup>&</sup>lt;sup>3</sup>Russell Overlay and Cash includes the cash within the portfolio including the collateral for the Russell overlay program. The performance includes the impact of the overlay program to the total plan. On pages 6 and 7, you can see a breakout of the contribution of each component of this.



<sup>&</sup>lt;sup>2</sup> Net of contributions and dispersions from trust fund.

#### Fiscal Year to Date Waterfall Chart

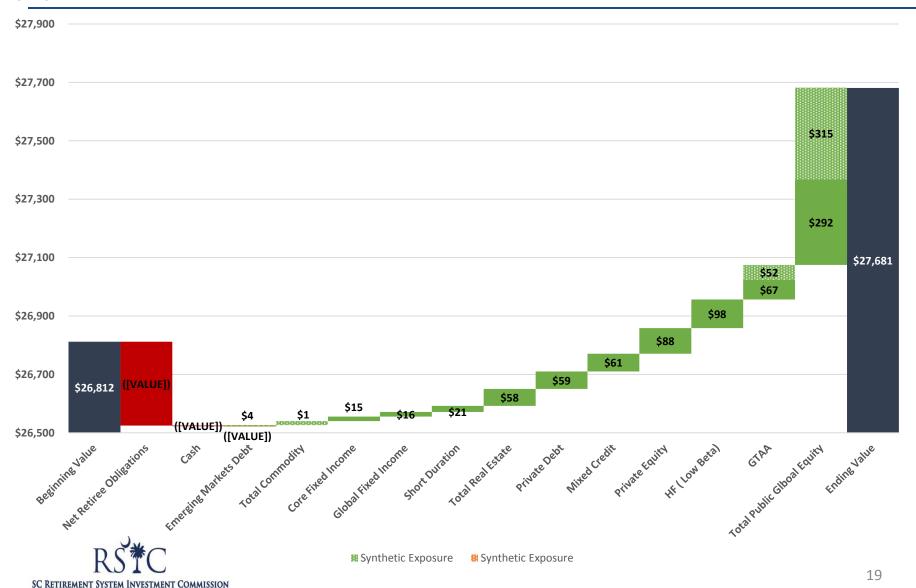
As of September 30, 2013





#### Fiscal Year Investment Earnings by Asset Class

As of September 30, 2013



#### Transparency

- Quarterly reports from HEK and RSIC staff to Commission
- Quarterly reports to stakeholders
- Annual Investment Report
- CAFR
- Public Meetings
- Website

